

REMARKS

Applicants respectfully request favorable reconsideration of this application.

Claims 1-4 and 6 stand rejected under 35 U.S.C 103 over GB 2,165,396 to Lewin et al. (Lewin) in view of IEEE "A UHF Buoyant Antenna" by Smith et al. (Smith).

Without acceding to the outstanding rejections on art, Claim 1 has been amended to more particularly point out distinguishing aspects of Applicants' invention. Claim 4 has been amended to depend properly from independent Claim 3, and Claim 6 has been rewritten as an independent claim.

No new matter has been added.

Independent Claim 1, as amended, sets forth, *inter alia*, an antenna dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency, the length of the antenna being less than 0.25λ , where λ is the free space wavelength at the operating frequency, and independent Claim 3 sets forth, *inter alia*, the length of the antenna being less than 0.25λ and the diameter of the antenna being less than 0.02λ , where λ is the free space wavelength at the operating frequency, the antenna being dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency. Applicants respectfully submit that the above-recited features of Claims 1 and 3 are neither disclosed, nor fairly suggested by the art of record, including Lewin and Smith.

The Office contends that Lewin discloses that the choice of a resonator length equal to half the free-space wavelength is not mandatory, and thus provides a suggestion of using other design choices regarding the length of the antenna (see Lewin, 1: 86-90). Applicants disagree.

Lewin distinguishes its antenna from the prior art by specifying a longer one free-space wavelength, as compared to the one-half free-space wavelength of the prior art (see Lewin, 1: 12-24). Further, if one of ordinary skill in the art were to follow the suggestion provided by the above referenced portion of Lewin, the difference between the free space wavelengths would not be reduced as suggested by the Office. On the contrary, the difference would be increased even further, because the suggestion provided by Lewin is to increase (rather than decrease) the one-half free space wavelength. Particularly, Lewin (1:86-90) states that “the choice of the resonator length L to equal half the free-space wavelength, as indicated by Lee, is not mandatory and a greater length, such as a full wavelength, would have advantages . . .” (emphasis added).

In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have lead a person of ordinary skill in the art to select the references and combine them in a way that would produce the claimed invention. *Carston Manufacturing Co. v. Cleveland Golf Company*, 242 F.3d 1376 (Fed Cir. 2001).

Since the Lewin/Smith combination suggests upsizing rather than downsizing the dimensions of an antenna, it is not suggested by either Lewin or Smith that coupling a slot of the antenna of Lewis to a feed circuit at its midpoint will produce an antenna being dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency, the length of the antenna being less than 0.25λ , where λ is the free space wavelength at the operating frequency as set forth in amended Claim 1 and Claim 3.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or

motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). MPEP 2143.01. When prior art references require selective combination to render an invention obvious, there must be some reason for the combination, other than the hindsight gleaned from the invention itself. *In re Scott E. Johnston*, No. 051321p, Federal Circuit January 30, 2006. The cited references which suggest the opposite from Applicant's approach do not provide the requisite teaching, suggestion or motivation to produce Applicants' claimed invention.

The outstanding rejection should, therefore, be withdrawn, and Claims 1 and 3 should be allowed, as should their dependents.

Claim 6 has been rewritten in independent form and recites a collinear antenna arrangement that distinguishes patentably from the applied references. The Examiner's last Official Action fails to address this structure, which is neither shown nor suggested in the cited references.

In view of the foregoing, it is respectfully submitted that this application is believed to be in condition for allowance.

Inasmuch as the application is under Final rejection, Applicants have exercised care in amending the claims to overcome the rejections in a manner which is not believed to have materially broadened the scope thereof, or which would require a new search. The amendments herein are simply directed to overcoming the rejections of record, and the amendments made to the claims herein do not raise any new issues that would require

substantial additional consideration or a new search. Examiner will note that the claim language of amended Claim 1 has been examined previously under Claim 3, while Claim 6 merely rewrites the claim as independent form. Applicants believe that the changes made herein clearly place all of the claims in condition for allowance, and accordingly, entry of the Amendment and allowance of the claims are appropriately and respectfully requested. In the alternative, the changes made herein clearly place the claims in better condition for appeal, and entry of the Amendment would be appropriate on that basis, as well.

Should the Examiner believe that any further action is necessary to place this application in better form for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T2263-903099) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

MILES & STOCKBRIDGE P.C.

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